CLAIMS

1. Bistable MEMS microswitch produced on a substrate (1) and capable of electrically connecting the ends (12, 13, 14, 15) of at least two conductive tracks (2, 3, 4, 5), including a beam (6) suspended above the surface of the substrate, wherein the beam is embedded at its two ends and is subjected to compressive stress when it is in the non-deformed position, wherein the beam (6) has electrical contact-forming means (7, 8) arranged so as to produce a lateral connection with the ends of the two conductive tracks when the beam is deformed in a horizontal direction with respect to the surface of the substrate, which microswitch has means (20, 30, 40, 50) for actuating the beam so as to place it either in a first deformed position, corresponding to a first stable state, or in a second deformed position, corresponding to a second stable state and opposite the first deformed position with respect to the non-deformed position, wherein the electrical contact-forming means (7, 8) ensure the connection of the ends (12, 13, 14, 15) of the two conductive tracks (2, 3, 4, 5) when the beam is in its deformed position.

2. Microswitch according to claim 1, characterised in that, as the microswitch is a dual microswitch, the first deformed position corresponds to the connection of the ends (12, 13) of two first conductive tracks (2, 3), and the second deformed position corresponds to the

connection of the ends (14, 15) of two second conductive tracks (4, 5).

3. Microswitch according to claim 1, characterised in that, as the microswitch is a single microswitch, the first deformed position corresponds to the connection of the ends of two conductive tracks (302, 303) and the second deformed position corresponds to an absence of a connection.

4. Microswitch according to any one of claims 1 to 3, characterised in that the beam (6) is made of a dielectric or semiconductor material and the electrical contact-forming means are made of an electrically conductive pad (7, 8) integrated into the beam.

5. Microswitch according to claim 4, characterised in that the means for actuating the beam include thermal actuators (20, 30, 40, 50) using a bimetal effect.

6. Microswitch according to claim 5, characterised in that each thermal actuator (20) includes a block of thermally conductive material (21) in close contact with an electrical resistance (22).

7. Microswitch according to claim 4, characterised in that the means for actuating the beam include means for implementing electrostatic forces (271, 272, 273, 274; 261, 262, 263, 264).

8. Microswitch according to claim 4, characterised in that the means for actuating the beam include thermal actuators using a bimetal effect and means for implementing the electrostatic forces.

9. Microswitch according to any one of claims 1 to 3, characterised in that the beam (506) is made of an electrically-conductive material.

10. Microswitch according to claim 9, characterised in that the means for actuating the beam include means for implementing electrostatic forces (506; 571, 572, 573, 574).

11. Microswitch according to any one of the preceding claims, characterised in that the electrical contact-forming means (7', 8') have a form enabling them to be embedded between the ends (12', 13', 14', 15') of the conductive tracks (2, 3, 4, 5) to be connected.

12. Microswitch according to claim 10, characterised in that the ends (12', 13', 14', 15') of the conductive tracks (2, 3, 4, 5) have a flexibility enabling them to match the form of the electrical contact-forming means (7', 8) during a connection.

13. Microswitch according to any one of the previous claims, characterised in that it includes release spring-forming means (111) for at least one of the embedded ends of the beam (106).

14. Microswitch according to any one of claims 1 to 13, characterised in that the electrical contact-forming means are means providing an ohmic contact.

15. Microswitch according to any one of claims 1 to 13, characterised in that the electrical contact-forming means are means providing a capacitive contact.